

INCORPORATION OF A PHASE MAP INTO FAST MODEL-BASED OPTICAL PROXIMITY CORRECTION SIMULATION KERNELS TO ACCOUNT FOR NEAR AND MID-RANGE FLARE

ABSTRACT OF THE DISCLOSURE

5 A first method to compute a phase map within an optical proximity correction simulation kernel utilizes simulated wavefront information from randomly generated data. A second method uses measured data from optical tools. A phase map is created by analytically embedding a randomly generated two-dimensional array of complex numbers of wavefront information, and performing an inverse Fourier Transform on the resultant array. A filtering function requires the amplitude of
10 each element of the array to be multiplied by a Gaussian function. A power law is then applied to the array. The elements of the array are shuffled, and converted from the phasor form to real/imaginary form. A two-dimensional Fast Fourier Transform is applied. The array is then unshuffled, and converted back to phasor form.